

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
12 May 2005 (12.05.2005)

PCT

(10) International Publication Number
WO 2005/043450 A1

(51) International Patent Classification⁷: **G06K 9/00**
(21) International Application Number:
PCT/AU2004/001507

(22) International Filing Date: 29 October 2004 (29.10.2004)
(25) Filing Language: English
(26) Publication Language: English

(30) Priority Data:
2003905991 31 October 2003 (31.10.2003) AU

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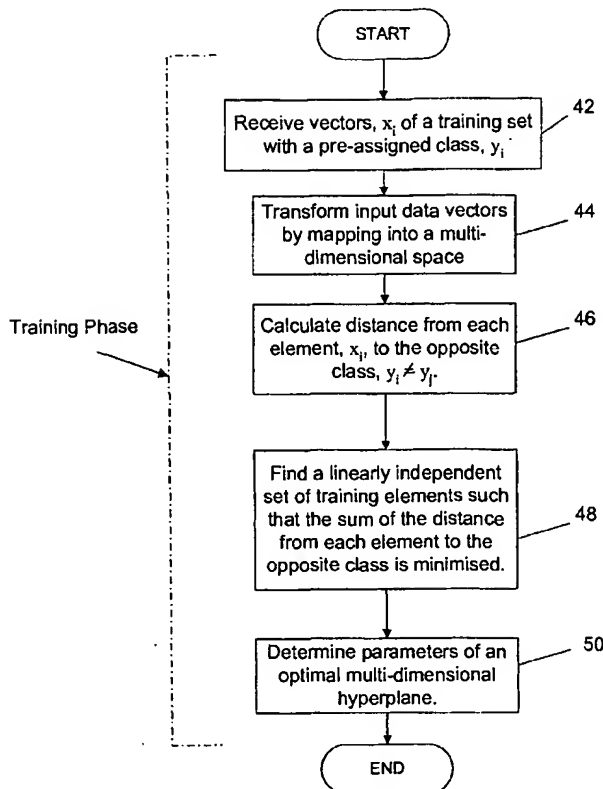
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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,

[Continued on next page]

(54) Title: **IMPROVED SUPPORT VECTOR MACHINE**



(57) Abstract: A method for operating a computer as a support vector machine (SVM) in order to define a decision surface separating two opposing classes of a training set of vectors. The method involves associating a distance parameter with each vector of the SVM's training set. The distance parameter indicates a distance from its associated vector, being in a first class, to the opposite class. A number of approaches to calculating distance parameters are provided. For example, a distance parameter may be calculated as the average of the distances from its associated vector to each of the vectors in the opposite class. The method further involves determining a linearly independent set of support vectors from the training set such that the sum of the distances associated with the linearly independent support vectors is minimised.

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FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,
SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

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Published:

— *with international search report*